

## APPARATUS AND METHOD FOR AN INTERFACE UNIT FOR DATA TRANSFER BETWEEN PROCESSING UNITS IN THE ASYNCHRONOUS TRANSFER MODE

### 5    **Abstract of the Disclosure**

In a data processing system have a master-state data processing unit and at least one slave-state data processing unit, the data processing units can be provided with an asynchronous transfer mode interface unit **18** for transferring data cells there between.

10    The interface unit **18** provides and receives signals formatted in the Utopia protocol. The interface unit **18** includes processor acting as a state machine **181**, **184** and a buffer out memory unit **182**, **183** for buffering the data groups between the interface unit processor and the direct memory access unit of the data processing unit. The interface unit **18** can act in a receive mode and a transmit mode for a master-state data processing unit and can  
15    act in a receive mode **181**, **182** and transmit mode **184**, **183** in a slave-state data processing unit. An event signal provides an efficient exchange of transfer of data between the direct memory access unit **14** and the buffer memory storage unit **182**, **183** in the slave mode.

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**APPARATUS AND METHOD FOR AN INTERFACE  
UNIT FOR DATA TRANSFER BETWEEN A HOST  
PROCESSOR AND A DIGITAL SIGNAL PROCESSOR  
IN THE ASYNCHRONOUS TRANSFER MODE**

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**Abstract of the Disclosure**

In a data processing system have a master-state data processing unit and at least one slave-state data processing unit, the data processing units can be provided with an asynchronous transfer mode interface unit for transferring data cells there between. The interface unit provides and receives signals formatted in the Utopia protocol. The interface unit includes processor acting as a state machine and a buffer out memory unit for buffering the data groups between the interface unit processor and the direct memory access unit of the data processing unit. The interface unit can act in a receive mode and a transmit mode for a master-state data processing unit and can act in a receive mode, and transmit mode in a slave-state data processing unit. An event signal provides an efficient exchange of transfer of data between the direct memory access unit and the buffer memory storage unit in the slave mode.

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